



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 4, 2019

Bart Hyita, President
Bronco Utah Operations, LLC
P.O. Box 527
Emery, Utah 84522

Subject: Approval of ROW Revision, Emery Deep Mine, Bronco Utah Operations, LLC,
C/015/0015, Task #5868

Dear Mr. Hyita:

The above-referenced amendment is approved effective March 4, 2019. The Division has completed a Technical Analysis of the change and found that it meets the requirements of the Utah Coal Rules. A stamped incorporated copy of the amendment is enclosed for your copy of the Mining and Reclamation Plan.

Enclosed are two (2) copies of the revised permit to add the ROW Revision, 120 acre adjacent area to the Emery Deep Mine. Please read the permit to be sure you understand the requirements, then have both copies signed by the appropriate representative and return one copy to the Division.

Thank you for your help during this process. If you have any questions, please feel free to call me at (801) 538-5350.

Sincerely,

Steve Christensen
Coal Program Manager

SKC/sqs
Enclosures
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FEDERAL

PERMIT

April 6, 2016
Revised March 4, 2019

C/015/0015

**STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801**

This permit, C/015/0015, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (Division) to:

**Bronco Utah Operations, LLC
P.O. Box 527
Emery, Utah 84522
(801) 286-2301**

for the Emery Deep Mine. A surety performance bond in the amount of \$4,596,000 payable to the State of Utah, Division of Oil, Gas and Mining and the United States Department of Interior, Office of Surface Mining Reclamation and Enforcement is filed with the Division. Consolidation Coal Company is the lessee of federal coal lease U-5287 and the lessee of certain fee-owned parcels in Sections 29 and 30, Township 22 South, Range 6 East, SLBM.

- Sec. 1 STATUTES AND REGULATIONS** - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act.
- Sec. 2 PERMIT AREA** - The permittee is authorized to conduct surface disturbing activities only as described in the approved Mining and Reclamation Plan and within areas covered by the Performance Bond which are within the described permit area at the Emery Deep Mine, situated in the state of Utah, Emery County, and located as follows:

Township 22 South, Range 6 East, SLBM

- Section 27:** SE1/4NW1/4, N1/2NE1/4SW1/4, W1/2SW1/4NE1/4,
consisting of East Portal
- Section 30:** part of E1/2NE1/4 consisting of Borehole Pump No. 3
- Section 32:** part of NW1/4, NE1/4, E1/2SE1/4 consisting of Main Portal
- Section 33:** part of NW1/4, NE1/4, N1/2SW1/4 consisting of Main Portal
and Emery 2 Expansion

Sec. 3 AUTHORIZED MINING AREA - The permittee is authorized to conduct underground coal mining and reclamation activities only as described in the approved Mining and Reclamation Plan and on lands where the "Right-of-Entry" has been acquired. This area includes the area above underground works and areas subject to subsidence and is described as follows:

Township 22 South, Range 6 East, SLBM

- Section 19:** S1/2NE1/4, E1/2SW1/4, and SE1/4;
Section 20: S1/2NE1/4, SE1/4 NW1/4 and S1/2;
Section 21: S1/2N1/2 and S1/2;
Section 22: S1/2, SW1/4NW1/4, portions of the following
E1/2SE1/4NW1/4, SW1/4SE1/4NW1/4, S1/2NW1/4NE1/4,
SW1/4NE1/4, SW1/4SW1/4NE1/4NE1/4, W1/2SE1/4NE1/4,
S1/2NE1/4SE1/4NE1/4, SE1/4SE1/4NE1/4
Section 23: S1/2SW1/4, portions of SW1/4SW1/4NW1/4, NW1/4SW1/4,
NE1/4SW1/4
Section 26: NW1/4 NW1/4
Section 27: W1/2, W1/2NE1/4, NE1/4NE1/4, part of SE1/4NE1/4
Section 28: All
Section 29: All
Section 30: E1/2, E1/2NW1/4, SW1/4NW1/4, N1/2NW1/4SW1/4,
E1/2SW1/4
Section 31: N1/2, W1/2SW1/4, E1/2SE1/4, SW1/4SE1/4
Section 32: All
Section 33: W1/2, NE1/4

Township 23 South, Range 6 East

- Section 5:** NE1/4NW1/4, N1/2NE1/4

This legal description is for the authorized mining area of the Emery Deep Mine. The permittee is authorized to conduct coal mining and reclamation operations connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

Sec. 3 COMPLIANCE - The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.

Sec. 4 PERMIT TERM - This permit expires on January 7, 2021.

Sec. 5 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Division Director. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13{e} and R645-303.

Sec. 6 RIGHT OF ENTRY - The permittee shall allow the authorized representative of the Division, including but not limited to inspectors, and representatives of the OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:

- (a) Have the rights of entry provided for in 30 CFR 840.12, R645-400-110, 30 CFR 842.13 and R645-400-220;
- (b) Be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-210 and 30 CFR 842, when the inspection is in response to an alleged violation reported to the Division by the private person.

Sec. 7 SCOPE OF OPERATIONS - The permittee shall conduct surface disturbing activities only on those lands specifically designated as within the permit area (in section 2 above) on the maps submitted in the approved plan and approved for the term of the permit and which are subject to the performance bond. All coal mining and reclamation operations are to be conducted within the bounds of the authorized mining area.

Sec. 8 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:

- (a) Any accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;
- (b) Immediate implementation of measures necessary to comply; and
- (c) Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

- Sec. 9 DISPOSAL OF POLLUTANTS** - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.
- Sec. 10 CONDUCT OF OPERATIONS** - The permittee shall conduct its operations:
- (a) In accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and
 - (b) Utilizing methods specified as conditions of the permit by DOGM in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 11 EXISTING STRUCTURES** - As applicable, the permittee will comply with R645-301 and R645-302 for compliance, modification, or abandonment of existing structures.
- Sec. 12 RECLAMATION FEE PAYMENTS** - The operator shall pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit, for sale, transfer or use.
- Sec. 13 AUTHORIZED AGENT** - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 14 COMPLIANCE WITH OTHER LAWS** - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq), and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.
- Sec. 15 PERMIT RENEWAL** - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 16 CULTURAL RESOURCES** - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify the Division. The Division, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by the Division within the time

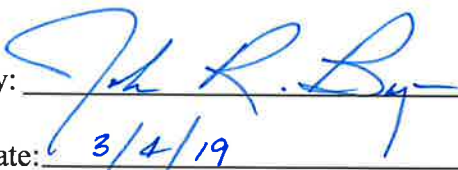
frame specified by the Division.

Sec. 17 APPEALS - The permittee shall have the right to appeal as provided for under R645-300.

Sec. 18 SPECIAL CONDITIONS - There are special conditions associated with this permitting action, as described in Attachment A.

The above conditions (Secs. 1-18) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them. These conditions may be revised or amended, in writing, by the mutual consent of the Division and the permittee at any time to adjust to changed conditions or to correct an oversight. The Division may amend these conditions at any time without the consent of the permittee in order to make them consistent with any federal or state statutes and any regulations.

THE STATE OF UTAH

By: 
Date: 3/4/19

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

Authorized Representative of the Permittee

Date: _____

ATTACHMENT A
Special Conditions

1. Bronco Utah Operations, LLC will submit surface and ground water quality data for the Emery Deep Mine on a quarterly basis in an electronic format through the Electronic Data Input web site, <http://linux3.ogm.utah.gov/cgi-bin/appx-ogm.cgi>
2. Mining beneath Quitcupah stream buffer zone (shown on Plate V-5) and the Alluvial Valley Floor will be room and pillar mining with no full extraction and no partial extraction, as described in Section IV.A.1 of the MRP.
3. Within two years of the issuance of this permit, the coal seam elevations and coal seam thickness isopachs will be completed on plates V-17 through 25 for the extent of the mining area shown on Plate IV-2, Underground Operations Plan; and prior to mining beneath the stream buffer zone the updated plates V-17 through 25 will be approved for incorporation into the MRP.



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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0150015
TaskID: 5868
Mine Name: EMERY DEEP MINE
Title: ROW REVISION

Summary

On February 8th, 2019, the Division of Oil, Gas and Mining (the Division) received an amendment to the Emery Deep Mining and Reclamation Plan (MRP) from Bronco Utah Operations, LLC (the Permittee). The amendment proposes the addition of a 120 acre tract of Federal coal right of way (ROW). The project location is Township 23S, R 6E, Section 5, Lots 1-3.

As part of the Federal approval for the proposed mining in this block of coal, the Bureau of Land Management completed an Environmental Assessment (EA). The EA was prepared to analyze the potential environmental impacts of the proposed underground ROW.

Access to the Federal coal will allow the Permittee to access fee and State owned coal to the west of the ROW. The State coal is administered by the School and Institutional Trust Lands Administration (SITLA). The SITLA coal is located within lease ML-51745-OBA.

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General Contents

Right of Entry

Analysis:

The application meets the State of Utah R645 requirements for Right of Entry.

The 120 acre section of Federal coal that encompasses the right of way was approved by the Bureau of Land Management (BLM) on February 6th, 2019. As part of the Federal approval for the proposed mining in this block of coal, the Bureau of Land Management completed an Environmental Assessment (EA). The EA was prepared to analyze the potential environmental impacts of the proposed underground ROW.

The Decision of Record (DR) and Finding of No Significant Impact were approved on that date (UT-G-020-2018-0051-EA). A thorough description of BLM's approval process for the right of way can be found here:

<https://eplanning.blm.gov/epl-front-office/eplanning/projectSummary.do?methodName=renderDefaultProjectSummary&projectId=116574>

The Permittee has updated Appendix I-2 where the ownership information (surface and mineral) are provided. Additionally, the adjacent area legal description has been updated in Section IV.A.1 Underground Mine Plan on page 1

Environmental Resource Information

Hydro Baseline Information

Analysis:

The amendment meets the State of Utah R645 requirements for Baseline Hydrologic Information.

The proposed Federal ROW is located within the currently approved area of hydrologic evaluation as shown on Plate VI-4, Ground Water Monitoring Well and Surface Water Monitoring Site Location Map. As a result, the historic and current hydrologic monitoring data can be applied to characterizing the ground and surface water systems both within and adjacent to the proposed mine expansion.

The Permittee has updated Plate VI-7, Upper Ferron Sandstone Potentiometric Surface 2018 and Plate VI-8, Lower Ferron Sandstone Potentiometric Surface 2018. The two plates are currently found in the approved MRP; however, the Permittee has updated them from 2006 to 2018 by utilizing water monitoring data collected during that 12 year span. Additionally, Plate VI-6, Anticipated Initial Depth of Groundwater Over Bottom of I-Seam has been updated.

Plate VI-3 depicts Utah State Appropriated Water Rights. Upon review of this plate, it does not appear that any water rights have been identified within the proposed Federal ROW.

Upon review of Plate VI-6, Ground Water Monitoring Well and Surface Water Monitoring Site Location map, two ephemeral washes are found within the Federal ROW. The ephemeral wash located on the eastern portion of the Federal ROW has been monitored at surface water monitoring sites SWMS-11 and SWMS-12 since the approval of the Emery No. 2 Mine (Task #5362, final approval March 9th, 2017). Additionally, the ephemeral wash located in the eastern section of the ROW was characterized by the Permittee in Appendix VI-22, Baseline Investigation of Unnamed Ephemeral Wash Affected by Emery 2 Surface Facilities (Task #5362).

The previous technical analysis (Task #5859) identified a deficiency relative to the drainage depicted on the western portion of the Federal ROW. Based on the symbology/depiction of the drainage, it appeared to be ephemeral in nature; however, the application did not provide any baseline information to demonstrate that.

The Permittee has provided a report that evaluates/characterizes the nature of this drainage. A field investigation was conducted utilizing protocols developed by the Surface Water Quality Bureau of the New Mexico Environment Department. The protocols serve to determine whether an individual drainage is ephemeral, intermittent or perennial in an effort to aid the determination of potential beneficial uses of those streams.

The generation of the report involved the review and analysis of topographic mapping, geology, groundwater information, aerial photography information and soil data obtained from the U.S. Natural Resources Conservation Service Web Soil Survey. A field survey was conducted on February 26th, 2019. The field survey involved traversing the unnamed channel on foot and recording GPS locations of relevant features and obtaining photographs of representative reaches of the channel.

The report identifies the unnamed stream channel as UNT-3. UNT-3 drains a watershed of approximately 1.5 square miles. A major tributary to UNT-3 was also identified and evaluated (herein referred to as UNT-4).

Soil data in the area of UNT-3 and UNT-4 was provided in Attachment A of the report. The field survey notes obtained are provided in Attachment B of the report. Attachment C provides the photographs obtained from the field investigation. Figure 1, General Area of Unnamed Channel Evaluation depicts the location of the UNT-3 and UNT-4. Figure 2 provides a map that identifies the locations where waypoints, photographs and waypoints were obtained. Field observations are summarized in Table 1.

Based on the field observations obtained, an absence of sinuosity and meander patterns indicative of an intermittent or perennial stream were absent for both UNT-3 and UNT-4. No water or pooling was noted for either channel. Additionally, no evidence of filamentous algae or periphytons was observed. Such organisms are indicative of streams that receive some base flow component.

The summary of the information provided in the report indicate that: 1) the channel bottoms are consistently above the regional water table and 2) appear to convey flow infrequently and only in response to precipitation events within the watershed or snowmelt.

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Probable Hydrologic Consequences Determination

Analysis:

The amendment meets the State of Utah R645 rules for Probable Hydrologic Consequences Determination.

Coal in the Emery Deep Mine and the proposed Federal ROW expansion is located in the Ferron Sandstone Member (upper, middle and lower units) of the Mancos Shale. As the mine encounters ground water, the flow patterns within the Ferron Sandstone are altered. Ongoing water monitoring has shown significant declines in several monitoring wells completed primarily within the Upper Ferron Sandstone. In order to evaluate the extent of drawdown as a result of mining activity in the Ferron Sandstone, the Permittee has performed several analyses including a mass balance approach model, MODFLO modeling analyses as was the Hantush equation which assumes the Ferron Sandstone aquifer to be homogenous, isotropic and pumped at a constant rate.

Based upon the hydrogeologic analyses and data presented in Chapter VI, it's clear that mining activity within the Ferron Sandstone produces a decline in water level and alters flow direction. However; the modeling results and supporting data provided indicate that post-mining water levels will gradually return to pre-mining conditions once pumping of the underground mine workings cease. It follows that as groundwater levels return to approximate pre-mining elevations, the pre-mining flow directions will also be re-established.

Impacts to surface water quantity and quality in the Federal ROW and adjacent area is considered to be minimal. No surface disturbance is proposed with the addition of the Federal ROW. As a result, the potential for increased sedimentation is minimal. Additionally, only first mining will be conducted in the Federal ROW. With no planned subsidence, the potential for stream flow alteration, flooding or interception of surface flows is considered minimal.

In order for the Division to assess the probable hydrologic consequences of the proposed ROW expansion, the Permittee was directed to provide the requisite baseline information for the unidentified drainage located in the western portion of the proposed Federal ROW (see Task #5859).

The Permittee has provided a baseline characterization of the unnamed drainage in Appendix VI-23, Baseline Investigation of Unnamed Ephemeral Washes). Based on the information provided in Appendix VI-23, the unnamed drainage is ephemeral. Given that first mining only is proposed within the Federal ROW, potential impacts to the drainage are minimal.

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Maps Monitoring and Sampling Locations

Analysis:

The application meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

Plate VI-4, Ground Water Monitoring Well and Surface Water Monitoring Site Location Map depicts the locations of the ground and surface water monitoring sites. It has been updated to show the two additional ground water monitoring sites (e.g. USGS 2-1 and T-1).

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Maps Subsurface Water Resources

Analysis:

The application meets the State of Utah R645 requirements for Surface Water Resource maps.

The Permittee has updated Plate VI-7, Upper Ferron Sandstone Potentiometric Surface 2018 and Plate VI-8, Lower Ferron Sandstone Potentiometric Surface 2018). The two plates are currently found in the approved MRP; however, the Permittee has updated them from 2006 to 2018 by utilizing water monitoring data collected during that 12 year span. Additionally, Plate VI-6, Anticipated Initial Depth of Groundwater Over Bottom of I-Seam has been updated.

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Operation Plan

Hydrologic Ground Water Monitoring

Analysis:

The application meets the State of Utah R645 requirements for Groundwater Monitoring.

Table VI-17 has been revised to show the addition of two water monitoring wells. Monitoring wells T1 and USGS 2-1 have been added to the groundwater monitoring plan. T1 has been identified as a water quality data collection well that will be sampled quarterly. USGS 2-1 is a monitoring well that has been proposed for quarterly water level monitoring only.

Monitoring well USGS 2-1 is completed within the lower Ferron Sandstone. The Permittee indicated that the well was completed in 1978. The data collected from this well, in addition to monitoring wells AA(L), Kemmerer and R1 are sufficient to identify potential impacts to ground water conditions in the lower Ferron Sandstone.

Monitoring well AA is located directly north of the proposed Federal ROW (approximately ¼ mile). Monitoring well AA is a historic monitoring well that has been monitored since 1980. The well has four completions in the following geologic units: Bluegate Shale (AA-B), upper Ferron Sandstone (A-U), middle Ferron Sandstone (A-M) and lower Ferron Sandstone (AA-L).

Monitoring well T1 has two completions: upper Ferron Sandstone (T1-U) and T1-B (Bluegate Shale). Monitoring of T1-U was discontinued in 2016. The Permittee has rehabilitated this completion and is proposing the quarterly monitoring of the well for the approved water quality parameters shown in Table VI-17.

A deficiency was identified during the previous review (Task ID #5859). The Permittee was directed to revise Table VI-17, Emery Mine Hydrologic Monitoring Program. Monitoring well T1-B needed to be added to the table. T1-B is currently monitored quarterly for water quality, but was inadvertently removed the table with the removal of T1-U. T1-B has been added. Additionally, the Permittee was directed to call out T1-U separately so as to clearly identify the two T1 wells. The table has been revised. Similarly, the Permittee was directed to break out the "Emery Town" wells as Emery Town Well 1 and Emery Town Well 2. Emery Town Well 1 is the water quality well and Emery Town Well 2 is a water level only well. The changes have been made

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Hydro Surface Water Monitoring

Analysis:

The application meets State of Utah R645 requirements for Surface Water Monitoring.

Upon review of the surface water resources information, a drainage was identified in the western portion of the proposed Federal ROW. The first Federal ROW application did not provide information for this drainage; therefore the Division was unable to determine whether or not additional surface water monitoring is required at this time.

The Permittee has provided a baseline characterization of the drainage in Appendix VI-23, Baseline Investigation of Unnamed Ephemeral Washes. Based on the information provided in this report, the drainage located in the western portion of the Federal ROW is ephemeral. As first mining only is proposed in the Federal ROW and due to the ephemeral characterization of the drainage and lack of any State appropriated water rights in the Federal ROW, additional surface water monitoring is not required at this time.

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Hydrologic Stream Buffer Zones

Analysis:

The application meets the State of Utah R645 requirements for Stream Buffer Zones.

No surface disturbance is proposed with the addition of the Federal ROW. As a result, the State of Utah R645 requirements for Stream Buffer Zone protection are not applicable.

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Maps Monitoring and Sampling Locations

Analysis:

The application meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

Plate VI-4, Ground Water Monitoring Well and Surface Water Monitoring Site Location Map has been revised to show the two additional ground water monitoring wells that have been added (i.e. USGS 2-1 and T1).

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Reclamation Plan

Hydrological Information Reclamation Plan

Analysis:

The amendment meets the State of Utah R645 requirements for Hydrologic Reclamation Plan.

As the proposed mining activity in the 2nd left panel does not call for any additional surface disturbance, a revision to the Hydrologic Reclamation Plan is not required.

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CHIA

CHIA

Analysis:

The application meets the State of Utah R645 requirements for Cumulative Hydrologic Impact Assessment.

The proposed ROW is located within the existing cumulative impact area (CIA). Plate 4, Hydrologic Map of the Lower Quitchupah Creek Watershed CHIA depicts the CIA. The proposed ROW area is within the boundaries of the established CIA.

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